

10/537262

PATENT APPLICATION

JC17 Rec'd PCT/PTO 01 JUN 2005

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Eiji SATO

Attn: PCT Branch

Application No. New U.S. National Stage of PCT/JP03/14949

Filed: June 1, 2005

Docket No.: 124137

For: VOLTAGE CONVERTING DEVICE, COMPUTER READABLE RECORDING  
MEDIUM WITH PROGRAM RECORDED THEREON FOR CAUSING  
COMPUTER TO EXECUTE FAILURE PROCESSING, AND FAILURE  
PROCESSING METHOD

**TRANSLATION OF THE ANNEXES TO THE  
INTERNATIONAL PRELIMINARY EXAMINATION REPORT**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Attached hereto is a translation of the annexes to the International Preliminary Examination Report (Form PCT/IPEA/409). The attached translated material replaces the material in the specification in pages 39 - 44.

Respectfully submitted,

James A. Oliff  
Registration No. 27,075

Eric D. Morehouse  
Registration No. 38,565

JAO:EDM/nxy

Date: June 1, 2005

OLIFF & BERRIDGE, PLC  
P.O. Box 19928  
Alexandria, Virginia 22320  
Telephone: (703) 836-6400

DEPOSIT ACCOUNT USE AUTHORIZATION Please grant any extension necessary for entry; Charge any fee due to our Deposit Account No. 15-0461
--

10/537262  
JC17 Rec'd PCT/PTO 01 JUN 2005

## CLAIMS

1. (Amended) A voltage converting device comprising:  
an electric load (M1, M2, G1) having an electric power generating  
5 function;  
a capacitor (C2) connected to an input of said electric load (M1, M2,  
G1);  
a down-converter (12) down-converting a voltage of said capacitor  
(C2);  
10 first control means (14, 31, 18) controlling an amount of electric  
power generated by said electric load (M1, M2, G1); and  
second control means (30, 30A, 30B) outputting to said first control  
means (14, 31, 18) a command for instructing prohibition of electric power  
generation in said electric load (M1, M2, G1) or for instructing decrease in  
15 an amount of electric power generated by said electric load (M1, M2, G1),  
when said down-converter (12) fails.

2. The voltage converting device according to claim 1, wherein  
said down-converter (12) has a voltage-up-converting function.

3. (Amended) The voltage converting device according to claim 1 or  
claim 2 wherein

said electric load (M1, M2) is a motor having an electric power  
generating function,

25 said second control means (30, 30A, 30B) outputs to said first control  
means (14, 31) a command for instructing restriction of a regenerative  
electric power generating function of said motor when said down-converter  
(12) fails, and

30 said first control means (14, 31) restricts an amount of regenerative  
electric power generated by said motor based on said command.

4. (Amended) The voltage converting device according to claim 3,  
wherein

said second control means (30, 30A, 30B) outputs to said first control means (14, 31) a command for instructing prohibition of regenerative electric power generation of said motor, and

5       said first control means (14, 31) controls said amount of regenerative electric power generated by said motor to zero based on said command.

5. (Amended) The voltage converting device according to claim 3, further comprising another electric load (M1) different from said motor, wherein

10       said second control means (30B) outputs to said first control means (31) a command for instructing restriction of said amount of regenerative electric power generated by said motor to a value smaller than power consumption in said another electric load (M1), and

15       said first control means (31) restricts said amount of regenerative electric power generated by said motor based on said command.

6. (Amended) A voltage converting device comprising:

a first electric load (G1, M2) having an electric power generating function;

20       a capacitor (C2) connected to an input of said first electric load (G1, M2);

a down-converter (12) down-converting a voltage of said capacitor (C2);

25       a second electric load (M1) that operates by receiving electric power generated by said first electric load (G1, M2);

first control means (14) controlling an amount of power consumption in said second electric load (M1); and

30       second control means (30A, 30B) outputting to said first control means (14) a command for instructing increase in an amount of power consumption in said second electric load (M1), when said down-converter (12) fails.

7. (Amended) The voltage converting device according to claim 6,

wherein

said second electric load (M1) is a motor,  
said first control means (14) further controls torque of said motor,  
said second control means (30A, 30B) outputs to said first control  
5 means (14) a command for instructing said motor to output positive torque,  
and

said first control means (14) controls the torque of said motor to a  
positive value based on said command.

10 8. (Amended) A computer readable recording medium with a  
program recorded thereon for causing a computer to execute failure  
processing in a voltage converting device,  
said voltage converting device including  
an electric load (M1, M2, G1) having an electric power generating  
15 function,  
a capacitor (C2) connected to an input of said electric load (M1, M2,  
G1), and  
a down-converter (12) down-converting a voltage of said capacitor  
(C2), wherein

20 said program causes the computer to execute  
a first step of generating a command for instructing prohibition of  
electric power generation in said electric load (M1, M2, G1) or for  
instructing decrease in an amount of electric power generated by said  
electric load (M1, M2, G1), when said down-converter (12) fails, and  
25 a second step of controlling an amount of electric power generated by  
said electric load (M1, M2, G1) based on the command generated in said  
first step.

30 9. (Amended) The computer readable recording medium with a  
program recorded thereon according to claim 8, wherein  
said electric load (M1, M2) is a motor having an electric power  
generating function, and  
in said first step, a command for instructing restriction of a

regenerative electric power generating function of said motor is generated.

10. (Amended) The computer readable recording medium with a program recorded thereon according to claim 9, wherein

5 in said first step, a command for instructing prohibition of regenerative electric power generation of said motor is generated.

11. (Amended) The computer readable recording medium with a program recorded thereon according to claim 9, wherein

10 said voltage converting device further includes another electric load (M1) different from said electric load (M2, G1), and

15 in said first step of said program, a command for instructing restriction of an amount of regenerative electric power generated by said motor to a value smaller than power consumption in said another electric load (M1) is generated.

12. (Amended) A computer readable recording medium with a program recorded thereon for causing a computer to execute failure processing in a voltage converting device,

20 said voltage converting device including  
a first electric load (M2, G1) having an electric power generating function,  
a capacitor (C2) connected to an input of said electric load (M2, G1),  
a down-converter (12) down-converting a voltage of said capacitor  
25 (C2), and

a second electric load (M1) that operates by receiving electric power generated by said first electric load (M2, G1), wherein

30 said program causes the computer to execute  
a first step of generating a command for instructing increase in an amount of power consumption in said second electric load (M1), when said down-converter (12) fails, and

a second step of controlling an amount of power consumption in said second electric load (M1), based on the command generated in said first

step.

13. (Amended) The computer readable recording medium with a program recorded thereon according to claim 12, wherein  
5       said second electric load (M1) is a motor, and  
      in said first step of said program, a command for instructing said motor to output positive torque is generated when said down-converter (12) fails, and  
      in said second step, the torque of said motor is controlled to a positive  
10       value based on the command generated in said first step.

14. (Amended) A failure processing method in a voltage converting device,  
      said voltage converting device including  
15       an electric load (M1, M2, G1) having an electric power generating function,  
      a capacitor (C2) connected to an input of said electric load (M1, M2, G1), and  
      a down-converter (12) down-converting a voltage of said capacitor  
20       (C2),  
      said failure processing method comprising:  
      a first step of generating a command for instructing prohibition of electric power generation in said electric load (M1, M2, G1) or for instructing decrease in an amount of electric power generated by said  
25       electric load (M1, M2, G1), when said down-converter (12) fails; and  
      a second step of controlling an amount of electric power generated by said electric load (M1, M2, G1) based on the command generated in said first step.

30       15. (Amended) The failure processing method according to claim 14, wherein  
      said electric load (M1, M2) is a motor having an electric power generating function, and

in said first step, a command for instructing restriction of a regenerative electric power generating function of said motor is generated.

16. (Amended) The failure processing method according to claim 15,  
5 wherein

in said first step, a command for instructing prohibition of regenerative electric power generation of said motor is generated.

17. (Amended) The failure processing method according to claim 15,  
10 wherein

said voltage converting device further includes another electric load (M1) different from said electric load (M2), and

in said first step of said failure processing method, a command for instructing restriction of an amount of regenerative electric power  
15 generated by said motor to a value smaller than power consumption in said another electric load (M1) is generated.

18. (Amended) A failure processing method in a voltage converting device,

20 said voltage converting device including  
a first electric load (M2, G1) having an electric power generating function,

a capacitor (C2) connected to an input of said electric load (M2, G1),  
a down-converter (12) down-converting a voltage of said capacitor  
25 (C2), and

a second electric load (M1) that operates by receiving electric power generated by said first electric load (M2, G1), wherein

said failure processing method comprising:

30 a first step of generating a command for instructing increase in an amount of power consumption in said second electric load (M1), when said down-converter (12) fails; and

a second step of controlling an amount of power consumption in said second electric load (M1), based on the command generated in said first

step.

19. (Amended) The failure processing method according to claim 18,  
wherein

5       said second electric load (M1) is a motor, and  
      in said first step of said failure processing method, a command for  
instructing said motor to output positive torque is generated when said  
down-converter (12) fails, and

10       in said second step, the torque of said motor is controlled to a positive  
value based on the command generated in said first step.